Paper No. 27

UNITED STATES PATENT AND TRADEMARK OFFICE
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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES
_____

Ex parte RAKESH KUMAR, PADMANABHAN ANANDAN, MICHAEL TINKER,
JAMES R. BERGEN, KEVIN A. WILLIAMS and KEITH J. HANNA
_____

Appeal No. 2000-0425
Application No. 08/917,402
_____

ON BRIEF
_____

Before THOMAS, HAIRSTON, and BLANKENSHIP, Administrative Patent Judges.

HAIRSTON, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1 through 6, 14, 15, 18 through 20, 22, 23 and 25. Claims 7, 8, 10, 11, 13, 16, 17, 21 and 24 are objected to as depending from a rejected base claim, but would be allowable if rewritten in independent claim form, and claims 9 and 12 are allowed.

The disclosed invention relates to an image processing method and system for producing a synthetic image of a scene from a mosaic of images, and for combining the synthetic image with a separately

generated second image to form a composite image that includes

parallax information.

Claim 1 is illustrative of the claimed invention, and it reads

as follows:

1. A method for image processing comprising the steps of:

generating a mosaic containing a plurality of first images of
a scene and translation parameters for each of said first images,
where said translation parameters define an alignment relationship
for each of the first images with respect to common image
information contained in each of the first images, said plurality
of first images including at least an image having a first
viewpoint of said scene and an image having a second viewpoint of
said scene, said first and second viewpoints being non-
coincidental;

generating a second image;

producing an indicium of viewpoint while generating said
second image;

rendering, in response to said indicium of viewpoint, a
synthesized image of said scene from said mosaic, said synthesized
image comprising image information from said first and second
viewpoints of said scene; and

compositing said synthesized image with said second image to
produce a composite image including parallax information.

The references relied on by the examiner are:

Mailhot	3,081,557	Mar. 19, 1963
Hemstreet	3,233,508	Feb. 8, 1966
Ebeling et al. (Ebeling)	3,439,105	Apr. 15, 1969
Ebeling	3,580,978	May 25, 1971
Collender	4,323,920	Apr. 6, 1982
Arrazola	4,515,450	May 7, 1985
Gold et al. (Gold)	5,428,543	June 27, 1995

Gehrmann   5,455,633   Oct. 3, 1995
                                            (filed Aug. 25, 1993)
Cruz et al. (Cruz)   5,613,032   Mar. 18, 1997
                                            (filed Sept. 2, 1994)

Claims 1, 2, 4, 14 and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ebeling ('978) in view of Collender.

Claim 3 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Ebeling ('978) in view of Collender, Ebeling ('105) and Arrazola.

Claim 5 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Ebeling ('978) in view of Collender and Ebeling ('105).

Claim 6 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Ebeling ('978) in view of Collender, Hemstreet and Cruz.

Claim 18 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Ebeling ('978) in view of Hemstreet and Collender.

Claims 19 and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ebeling ('978) in view of Collender, Ebeling ('105) and Arrazola.

Claim 22 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Ebeling ('978) in view of Collender, Ebeling ('105), Arrazola and Gold.

Claim 23 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Ebeling ('978) in view of Collender, Ebeling ('105), Arrazola and Gehrmann.

Claim 25 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Ebeling ('978) in view of Collender, Ebeling ('105), Arrazola and Mailhot.

Reference is made to the briefs (paper numbers 19 and 21) and the answer (paper number 20) for the respective positions of the appellants and the examiner.

OPINION

We have carefully considered the entire record before us, and we will reverse the 35 U.S.C. § 103(a) rejection of claims 1 through 6, 14, 15, 18 through 20, 22, 23 and 25.

According to the examiner's findings (answer, pages 3 and 4), Ebeling ('978) discloses a plurality of first images of a scene in a mosaic (Figure 4), first and second non-coincidental viewpoints of at least one of the first images, and "a synthesized image of said scene from said mosaic (col. 6, lines 68-73)."

We agree with the examiner that Ebeling ('978) discloses a mosaic of images (Figure 4). Even if we assume for the sake of argument that the examiner's finding is correct that Ebeling ('978) discloses first and second non-coincidental viewpoints of at least one of the first images, we do not, however, agree with the examiner's finding that Ebeling ('978) produces "a synthesized image of said scene from said mosaic." Ebeling ('978) clearly discloses that only one image in the mosaic is scanned at a time (column 6, lines 53 through 69; column 8, lines 11 through 16). If only one image is scanned at a time, then Ebeling ('978) is incapable of producing "a synthesized image of said scene from said mosaic" from the first and second non-coincidental viewpoints of the at least one first image (claim 1). The examiner's finding (answer, page 3) that Ebeling ('978) produces "an indicium of viewpoint . . . while generating said second image" may be correct, but Ebeling ('978) is completely silent as to producing "a synthetic image derived from said mosaic that represents a view of the scene [of the first image] corresponding to the indicium of viewpoint" produced for the second image" (claim 19).

The examiner acknowledges (answer, page 4) that "Ebeling ['978] does not disclose said translation parameters, nor does said

synthesized image comprise said image information from said first and second viewpoints."

We agree with the examiner's finding (answer, page 4) that "Collender positions two TV cameras to view a scene, each from a different viewpoint (col. 3, lines 50-53 and 60)," and synthesizes N views in-between the two views. In spite of such teachings, Collender is completely silent as to translation parameters for the views of a scene. Thus, we agree with the appellants' argument (brief, page 15) that neither of these references is concerned with "translation parameters for each of said first images, where said translation parameters define an alignment relationship for each of the first images with respect to common image information contained in each of the first images" as set forth in all of the claims on appeal.

Based upon the noted shortcomings in the teachings of Ebeling ('978) and Collender, and the fact that the other applied references do not cure these shortcomings, we will reverse all of the obviousness rejections of record.

DECISION

The decision of the examiner rejecting claims 1 through 6, 14, 15, 18 through 20, 22, 23 and 25 under 35 U.S.C. § 103(a) is reversed.

REVERSED

JAMES D. THOMAS Administrative Patent Judge	)	
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	)	
	)	BOARD OF PATENT
KENNETH W. HAIRSTON Administrative Patent Judge	)	APPEALS
	)	AND
	)	INTERFERENCES
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	)	
HOWARD B. BLANKENSHIP Administrative Patent Judge	)	

KWH/lp

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JUDGE HAIRSTON

APPEAL NO. 2000 -0425

APPLICATION NO. 08/917,402

APJ HAIRSTON

APJ THOMAS

APJ BLANKENSHIP

DECISION: **REVERSED**

PREPARED: Jun 6, 2003

OB/HD

PALM

ACTS 2

DISK (FOIA)

REPORT

BOOK